OREGON GPS USERS GROUP
MEETING MINUTES

Date: January 22, 2016

Location: Hilton Hotel, Eugene, Oregon

Board Members Present: Jim Elam, Chair
Dave Hills, Chair-Elect
John Minor, Treasurer
Chris Munson, Secretary

Called to Order: 1:00 pm
Adjourned: 4:15 pm
Contact Hours: 3.0 hours

Business Meeting

- All present at the meeting introduced themselves.
- John Minor made a Treasurer's Report.
- Eric Gakstatter was elected Chair-Elect.
- John Minor was re-elected as Treasurer.
- Chris Munson was re-elected as Secretary.
- Discussion was made as to whether to change the organization's name to "Oregon GNSS Users Group". ODOT has made a similar change for their "Oregon Real-Time GNSS Network". Dave Hills is to look into the time and expense that would be required to make the change.

Oregon Real-Time GNSS Network (ORGN) Update by Ken Bays of the Oregon Department of Transportation (ODOT)

- Ken introduced Joe Thomas, the new ODOT Geometronics manager.
- There are 670 ORGN rover accounts. About half of those belong to private surveyors.
- 55 out of 98 ORGN stations are now GLONASS enabled.
- There is a PDF on the Geometronics website about how to use ORGN GLONASS products.
- The Geometronics On-line Toolkit now shows which ORGN stations are GLONASS-enabled.
- ODOT still plans on upgrading ORGN stations operated by the Plate Boundary Observatory (PBO). UNAVCO has already upgraded some PBO stations on its own.
- Twelve ORGN stations are planned to be upgraded to GLONASS this year.
- Network rovers can get single-base GLONASS correctors from any GLONASS-enabled ORGN station. Network "MAX" GLONASS correctors will only be sent if the master station selected by the Spider software is GLONASS-enabled.
- The ORGN has plans in place to remain active during/after a disaster, specifically after an earthquake.

Malheur Wildlife Refuge Recovery & Control Survey by Mark Armstrong of the National Geodetic Survey (NGS)

- NGS ran 1st and 2nd order levels in and around the refuge in the 1930's.
- The Government Land Office (GLO) had the area originally surveyed in 1875-1877.
- The U.S. Department of Agriculture Biological Survey also surveyed in 1930-1936.
- Ice floes destroyed miles of fencing and many survey monuments in and around the refuge in 2013-2014.
- Mark Armstrong and Pat Barott tied some refuge survey monuments in Summer 2015, but were restricted to foot travel only due to fire danger. They concentrated on GPS observations of vertical benchmarks and some triangulation stations instead.
- David Hills of the U.S. Fish and Wildlife Service continued the call for survey assistance in the Malheur refuge once the "occupation" was over. A National Parks Pass is provided to all volunteers after 250 hours of service.

GNSS Updates—Civil GPS Service Interface Committee by Ken Bays of ODOT

- GPS has 40 satellites in constellation; 31 are set to "healthy" status.
- GPS III satellites are now in production, but none are yet launched. GPS III requires the OCX ground control system, which is currently be developed.
- GLONASS is now aligned to ITRF within 1 millimeter, and UTC within 2 nanoseconds.
- 28 GLONASS satellites are now in orbit; 23 are healthy.
- GLONASS is to remain free and open for civil use at this point.
- Two Galileo satellites were placed in the wrong orbit in 2014. Subsequent launches are okay.
- The fully operational date of Galileo has been continually delayed.
- 10 Galileo satellites are currently in orbit; 8 are healthy. A total of 30 satellites are planned.
- Galileo plans on charging for commercial use, including surveying.
- The Chinese Beidou system is currently planned to be free and open to civilian use.
- The Beidou system uses various orbits. 14 Beidou satellites are currently healthy.
- The QZSS (Japan) and Indian GNSS systems are regional only, and of limited or no use to GNSS users in the United States.

U.S. Army Corps of Engineers (USACE) Survey Marker Archive & Retrieval (U-SMART) by George Cathey & Cliff Bondurant, USACE

- U-SMART is a free online horizontal and vertical control database: usmart.usace.army.mil.
- Three levels of access: Public, USACE, USACE contractors.
- Some web browsers will report a security certificate error, due the fact that the website is a .mil site and doesn't issue certificates.
- The map, control point, and report tabs on the website are open to the public.
- USACE benchmarks, gauges (USGS), and USACE project control are viewable. The correct query must be set in the map tab according to what you wish to view.
- If you find a USACE marker and want more information, check the U-SMART database first. If you need more information after that, call Cliff Bondurant at (503) 808-4361.
- Generally, markers over 10 years old aren't available in the U-SMART database unless it was tied as part of a more recent project.

ODOT Geometronics On-line Toolkit Presentation by Ken Bays of ODOT

- Ken gave a short 15-minute presentation on the uses and features of the online toolkit.